

REMARKS

Claims 28 and 71 have been canceled. No claims have been added. Claims 1-4, 7-15, 18, 20-25, 29-32, 37-41, 44-49, 61, 63-68, 72-75, and 77 have been currently amended. Applicants submit that all amendments are supported by the application-as-filed and that no new matter has been added. Claims 1-27, 29-70, and 72-77 are now in the application. Reconsideration of the application is requested in light of the foregoing amendments and following remarks.

Even if the examiner continues to assert one or more bases of rejection, applicants specifically request that this amendment after Final Action be entered in order to put the application in better condition for the currently pending appeal.

The following remarks are structured to respond to the numbered paragraphs in the Official Action dated 12/19/2002, as well as to respond to the Advisory Action dated 04/04/2003, with the paragraph numbers shown in the left margin and underlined.

Applicants appreciate the examiner's specific comments in the Advisory Action, which have been most helpful in formulating this response.

Double Patenting

Office Action ¶1

Applicants appreciate withdrawal of the double patenting rejection on the basis of the submitted terminal disclaimer.

Drawings ObjectionOffice Action ¶'s 2 & 3

The drawings were objected to as not showing the bond element contact lengths. Applicants respectfully traverse the objection and point the examiner to FIGURE 4 which shows the bond element contact lengths as elements of incremental line 84. The specification has been amended at page 21 to specifically define the bond element contact lengths as being represented by line lengths ...traversed by an increment line 84, whereby the bond element contact length is now definite in the specification; and given the definite condition now in the specification, the respective

claims are definite, whereby no amendment is needed in the drawings, and none are proposed herein. Withdrawal of the objection to the drawings is respectfully requested.

The indication in the 04/04/2003 Advisory Action that this issue is hereby successfully resolved is appreciated.

Rejection of Claims under 35 U.S.C. §112, 1st Paragraph

Office Action ¶'s 4, 5, & 6

Claims 1-77 stand rejected under 35 U.S.C. §112 1st Paragraph. Applicants respectfully traverse the rejection. The examiner asserts that the specification does not disclose the structure of the stress receptor, transfer, dissipation and termination elements, does not define the amount, direction or type of stress which is applied to the composite material, and therefore does not disclose how to make/use the claimed invention.

In the Advisory Action, the examiner stated that the amendment (B) submitted 3/19/2003 does not place the application in condition for allowance because: All the independent claims make mention of the relation between bonds and stresses which may be imposed on such bonds because each of the bond elements is named in accordance to how it interacts with a stress [emphasis added].

As a matter of clarification, independent Claims 35 and 41, even before any amendment herein, contained no such "naming" relationship, though claims depending from Claims 35 and 41 did contain such relationships.

In order to resolve this issue, or at least to better present the claims for the pending appeal, all claims containing such name/interaction relationships have been amended to delete such relationships. Thus, bond elements (12) which were previously recited as *stress receptor elements* are now referred to as ones of a first sub-array of bond elements. Also, bond elements (14) which were previously recited as *transfer and dissipation elements* are now referred to as ones of a second sub-array of bond elements.

In addition, dependent Claims 28 and 71, which contained only functional, stress-response type limitations, have been canceled.

Applicants submit that, upon entry of the instant amendment, the rejection under 35 U.S.C. 112 1st Paragraph is rendered moot and should be withdrawn. Withdrawal of the rejection is respectfully requested.

Official Action ¶7.

Claim 7 stands rejected on the basis that the specification does not describe element 84 as indicating "bond element contact lengths" in the drawings. Applicants respectfully traverse the rejection.

See response to the drawings objection. Namely, the specification has been amended to correlate the "*bond element contact lengths*" to line lengths of the increment lines 84, which cross the individual bond elements in a transverse direction, thereby obviating the rejection. And since the specification recites element 84 in terms of an imaginary line, not in terms of "bond element contact lengths," all the claims have been amended to delete direct reference to element "84". Withdrawal of the rejection is respectfully requested.

The indication in the 04/04/2003 Advisory Action that this issue is hereby successfully resolved is appreciated.

Rejection of Claims under 35 U.S.C. §112, 2nd Paragraph

Official Action ¶8.

Claims 1-76 stand rejected as being indefinite. Applicants respectfully traverse the rejection. Each of the examiner's issues with respect to 35 U.S.C. 112 2nd paragraph is addressed here in the order raised in the Office Action.

Official Action ¶9.

In Claim 1, the examiner asserted that the recitation of the *third area of the bond pattern* renders the claim indefinite, and suggested deleting *of the bond pattern*. Applicants appreciate the suggestion. However, applicants have elected to propose alternative language in order to still clearly designate the bond pattern as the area being described. Accordingly, the amended language is a third area within which the bond pattern is defined. Applicants submit that such language is clear and definite

within the meaning of 35 U.S.C. 112 2nd paragraph. Accordingly, applicants respectfully request withdrawal of this basis of rejection.

The indication in the 04/04/2003 Advisory Action that this issue is hereby successfully resolved is appreciated.

Official Action ¶'s 10 & 11.

The examiner stated that the overall structure being claimed is not clear. The examiner repeated her question from the previous Official Action, asking again how the various bond elements differ from each other.

Applicants respond that this issue is now moot in view of the amendments to the claims, whereby the claims no longer refer to any bond element in any functional term. Accordingly, this basis of rejection is now successfully resolved. Withdrawal of the rejection is respectfully requested.

Official Action ¶ 12

Claims 3 and 4, the examiner asserted that the term *activated* is indefinite, but that the indefiniteness could be corrected by replacing "activated" with formed. The suggested replacement has been made, obviating this basis of rejection. Withdrawal of the rejection is respectfully requested.

The indication in the 04/04/2003 Advisory Action that this issue is hereby successfully resolved is appreciated.

Official Action ¶'s 13 & 14

The examiner stated that the rejections regarding the "bond element contact length" could be overcome if the language used in the specification and claims is consistent. Applicants submit that the language is now consistent between the specification and claims.

Regarding the rejection of Claims 8 and 9 pertaining to *bond element contact length*, the answer is the same as used in responding to paragraphs 2 and 3 of the Official Action above.

With regard to Claims 14-15, see the answers respecting Claims 3-4 above.

With regard to Claims 24-25, see the answers respecting Claims 3-4 above.

With regard to Claim 30, see the answer respecting Claim 1 above.

With regard to Claims 31-32, see the answers respecting Claims 3-4 above.

With regard to Claim 35, see the answer respecting Claim 1 above.

With regard to Claim 36, see the answer respecting Claim 1 above.

With regard to Claim 41, see the answers respecting Claims 1 and 7 above.

With regard to Claim 44, see the answer respecting Claim 1 above.

With regard to Claims 48-49, see the answers respecting Claims 3-4 above.

With regard to Claim 63, see the answer respecting Claim 1 above.

With regard to Claims 67-68, see the answers respecting Claims 3-4 above.

With regard to Claim 73, see the answer respecting Claim 63 above.

With regard to Claims 74-75, see the answers respecting Claims 3-4 above.

The indication in the 04/04/2003 Advisory Action that this issue is hereby successfully resolved is appreciated.

Rejection of Claims under 35 U.S.C. §102(b)

Official Action ¶'s 16 & 17

Claims 1-6, 30-34, and 73-77 stand rejected as unpatentable over McCormack et al, WO 99/14415. Applicants respectfully traverse the rejection.

Applicants have clearly distinguished stress receptor elements and transfer and dissipation elements from each other, in terms of the respective separate and distinct physical features set forth above, as well as orientation of the stress transfer and dissipation elements. The examiner has shown no such separate and distinct features in the reference, nor any recognition of the significance of the structural features of the bond elements as set forth in the claims.

In order to move the case toward allowance, the claims were amended in the previous amendment to recite that a portion of at least one of the first and second areas of respective said first and second flexible sheet materials is outside the bond pattern.

A key feature of the invention is that stresses received at the side edges of the bond pattern are dissipated with improved efficiency through implementation of bond

patterns of the invention. Thus, an unbonded portion of at least one of the sheet materials is a necessary feature of the invention.

The reference does not teach or suggest such stress transfer and dissipation structure, whereby the reference is defective to teach or suggest the invention as claimed.

Since the examiner did not address, in the 04/04/2003 Advisory Action, the matter of the rejection under 35 U.S.C. 102(b), applicants believe that the examiner will not continue to assert the rejection under 35 U.S.C. 102(b), or any related obviousness rejection if/when the claims as amended herein are formally entered into the application.

Applicants thus submit that all claims as presented herein are allowable over all references of record. Allowance is again respectfully solicited.

The Appeal Brief is being submitted herewith, along with a check in the amount of \$320 for the Appeal Brief fee.

No other fee is believed to be due. Should any other fee be properly due, or if any refund is due, kindly charge same, or credit any overpayment, to Deposit Account 23-2130.

Please feel free to contact me with any questions, comments or concerns, at the telephone number listed at the end of this document.

Respectfully submitted,
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